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ABSTRACT OF THE DISCLOSURE

An apparatus according to the present invention is a cellular IP modem that includes a baseband-to-intermediate frequency unit and a radio frequency unit. The baseband-to-intermediate frequency unit is configured to have a routing engine based on Cellular Internet Protocol. A method according to the present invention includes the steps of sending a data packet including routing information indicating an intermediate recipient other than a base station; receiving the packet at the intermediate recipient; and sending the packet in accordance with the routing information from the intermediate recipient to the base station. Additionally, a network architecture is described to support the creation of the Cellular IP network and its elements.